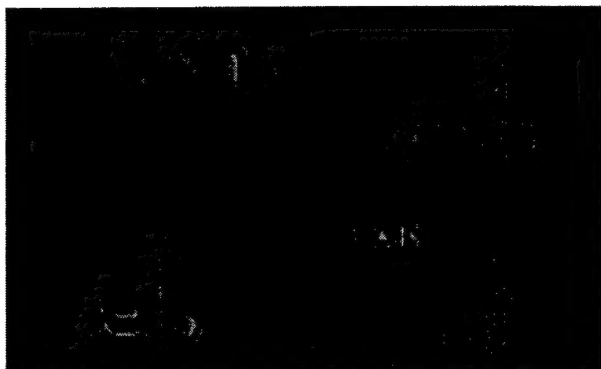


2001



Center for Middle East Public Policy

Working Paper Series

Learning by Radio in Afghanistan

*Distance Learning as an
Option for Societies in Crisis*

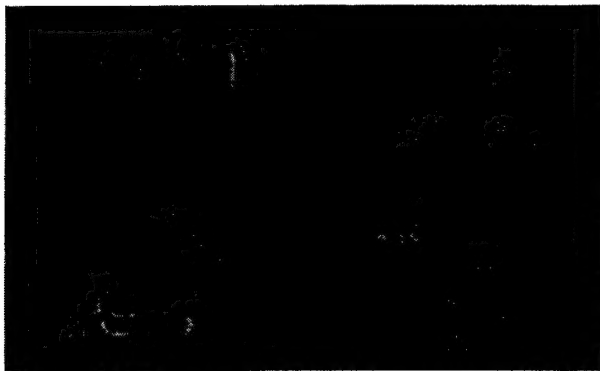
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Working Paper Series

Learning by Radio in Afghanistan

Distance Learning as an Option for Societies in Crisis

Cheryl Benard

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Preface

This draft paper examines whether radio can be used to facilitate basic education in Afghanistan. It first explores educational problems in Afghanistan. It then reviews other developing countries' use of radio as a means to transmit numeracy, literacy, and other basic skills. It concludes by examining what a sample curriculum for Afghanistan might look like. Throughout the report, it notes possible problems with and probable limits to attempts to use radio as a learning tool.

The Smith Richardson Foundation sponsored this research. It was conducted in association with the RAND Center for Middle East Public Policy (CMEPP). CMEPP analyzes political, social, economic, and technological developments in the Middle East and assesses their implications for the region and beyond. It is housed within the National Security Research Division (NSRD) at RAND. NSRD conducts research for the U.S. Department of Defense, for other U.S. government agencies, and for other institutions, including private foundations. Comments are welcomed and may be addressed to the author or to CMEPP's Director, Dr. Jerrold Green.

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Personal Foreword

My own involvement with the Afghan crisis began in 1981, when I was tasked to assess services being provided to Afghan refugees in Pakistan and found them to be extremely skewed to the disadvantage of women and children. This led to the design and organization of a health and education project for that segment—which certainly seemed worth targeting, if only because it in fact comprised the majority of refugees. The project began in 1982 and ran successfully for several years, first as a pilot project, then as an official project of Austria's development aid program.¹

One thing I encountered then, and have encountered persistently ever since, is the propensity of many Westerners, when confronted with Afghans, to feel called upon to engage in "lay anthropology." The impulse to rhapsodize about how the Afghans, and especially the Pashtun men, are different from everyone else on this planet, are more warlike, more archaically male, more intractable, etc., is pronounced, probably because the remoteness of Afghanistan lends itself to projections about a pre-modern, pre-globalization "Wild East" mythology. With apologies to those who treasure this myth: Neither in my personal dealings with them nor in my project work have I found the Afghans to be notably different from the rest of our species. I have worked with Austrian teachers who were at least as stubborn, and as resistant to change, as any Afghan refugee who ever crossed my path. I have endured negotiations with U.S. and European officials who were at least as tedious and self-important as any tribal Pashtun malik. Certainly the project in Gandaf Camp was not an easy one. We faced many bureaucratic obstacles, and cultural differences were at times pronounced, leading to stalemates, setbacks, and even moments of despair—moments that affected the Austro-Afghan members and the urban Afghan doctors and nurses of our team as much as they affected the rest of us. When I review the problems we faced, I find that most of them stemmed from the fact that we were dealing with a population that had not been socialized to accept the habits and values of modern civil society. They lacked even the notion of things that modern people routinely learn as children, such as voluntarily and cooperatively ordering yourself to permit the smooth and conflict-free operation of group activities, or prioritizing according to rational situational criteria. We also found the women to be eager to learn, and clear in their perception that many traditional ways of doing and looking at things were flawed—were, in fact, killing them and their children—and that a different way was well worth trying.

¹For a description of this project by team leader Mandana Kerschbaumer, see Cheryl Benard, Edit Schlaffer, *Die Grenzen des Geschlechts*, Rowohlt, Hamburg, 1984, p. 333.

Summary

The Taliban has placed a de facto ban on the education of girls even at the elementary school level. Home schooling projects operate, but under difficult conditions. They reach only a small number of girls and are subject to arbitrary closure, while the women running these schools experience threats and harassment. Boys are permitted to attend school, but the education available to them under Taliban control meets no current accepted standard.

To deny basic education to girls is a violation of international human rights. That aside, the educational impoverishment of Afghanistan bodes ill for its future.

Afghanistan faces enormous challenges if it is to rebuild a viable civil society. To deprive half the population of any education at all, while subjecting the other half to a mix of political indoctrination, eccentric religious interpretation, and rote learning, is not a promising path to social and economic development.

There are numerous efforts under way to obtain a better political outcome in Afghanistan. However, in the meantime, it seems important to provide Afghan children and youths with better and alternative educational content.

In other times and places, mass media have successfully stepped in where traditional educational methods were not effective or could not be implemented for geographic, economic, or other reasons. This project explores the feasibility of using a technological option to provide educational content to Afghan children and families.

The most suitable medium under the given circumstances is the radio. A "radio school" educational program can be broadcast from outside Afghanistan; it is therefore not subject to Taliban control and does not require Taliban approval, as other educational initiatives would.

Radio has been successfully used in other countries to teach elementary school subjects, including mathematics, language, and science.

U.S. government data show that Afghans have good access to radio and are safely able to listen to foreign broadcasts. BBC and VOA are widely heard.

Opinion surveys conducted inside Afghanistan by NGOs show that female literacy and education of girls, as well as boys, are highly desired by Afghan parents.¹

¹"Mothers resent the Taliban denial of female education. Poor and illiterate, as well as educated, women view the withdrawal of the right to proper education for children as an inconceivable and unnecessary denial of hope, which has

The proposed educational radio broadcast for Afghan children should provide literacy, numeracy, and other educational substance; give mental stimulation; inculcate fundamental habits of learning and scientific thinking; introduce the values of civil society; and keep alive an alternative view of the status of women and of the relationship between men and women.

Overview

This paper is divided into three sections. For those who are interested in the broader background, Section 1 briefly reviews the history of modern schooling in the Islamic world generally and in Afghanistan specifically. Readers who prefer to go in medias res may omit this section.

Section 2 describes the evolution of radio in education and identifies successful approaches in teaching through this medium.

Section 3 applies these insights to the Afghan situation and describes some elements of a sample curriculum for an Afghan radio school broadcast.

Conclusion

Upon reviewing the precedents, radio appears to be a promising medium for offering educational and civic content to young people in exceptional political and cultural circumstances. The applications of such an offering probably reach beyond Afghanistan. Other politically isolated youthful populations would benefit from such programs as well.

However, this preliminary study points to one important caution. It is obvious that cultural, social, and practical knowledge of the target population is a prerequisite for good program design. However, it is also essential to study the experiences of earlier radio education projects. Much of what works, and does not work, in radio education is counterintuitive. In interviews I discovered that many people believe certain things to be "obvious" when designing a program for children. Radio school projects show that such conclusions can be dangerous, leading to inefficiency and bad design. The most important lessons from earlier radio schools are summarized in Section 2.

sustained so many for so long, of potential, for a new generation to develop in peace instead of war, of resources, to knowledge and skills to provide the basic needs of life for which many parents have had to struggle or have never had, of another future generation's potential for quality of life." *Room to Maneuvre: Study on Women's Programming in Afghanistan*, UNDP, Kabul/Islamabad, 1996, p. 82.

1. Education in Islamic Societies

In contemporary campaign terminology, Muhammad might well style himself as "the education prophet." The value he placed on learning is legendary, as is his often quoted injunction to accept any burden in the name of education, even if it means traveling as far as China in search of knowledge. He specifically and repeatedly included both genders in these injunctions.

Besides his political and religious roles, Muhammad also functioned as his community's teacher. He interpreted for his followers the meaning of Koranic passages, explained or developed fundamental principles in the course of mediating arguments within his community of followers, and handed down guidelines for the conduct of daily life. Some of his teachings were deliberate, others occurred by subsequent inference; after his death, remembered details of his personal conduct were taken as the model for optimal Muslim behavior.

Education-related disputes pertaining to gender surfaced during the Prophet's lifetime, and were repeatedly resolved to the benefit of women.¹ For example, it is recorded in the hadiths that at one point the women in Muhammad's following complained about falling behind in their studies, apparently because he was giving lessons to the men during times of the day when the women were busy with household chores. In response, Muhammad set aside additional time to instruct the women so they could catch up.²

It is also known that Muhammad appointed women he considered religiously knowledgeable as teachers and imams, authorized to instruct not only other women but men too, and to lead the prayers of women and of mixed groups. After his death, his widow, Aishah, was one of the community's official consultants on the interpretation of religious law and personal practice. She also organized and ran a school for girls and boys.

For the years that followed, and much in keeping with the times, education in Islamic societies fell into three categories. First, there was practical instruction in the skills that an individual would need for his or her later profession. These

¹For example, in a complaint that sounds very contemporary, women pointed out that the semantics of his revelations used masculine pronouns only, excluding them, the women. Muhammad apparently agreed, and thereafter the language changed, with subsequent revelations specifically addressing "believing men and believing women," "devout men and devout women," "men who give in charity and women who give in charity," "men who guard their chastity and women who guard their chastity," etc.

²Sahih al Bukhari, quoted in Leila Ahmed, *Women and Gender in Islam*, Yale University Press, New Haven, 1992, p. 72.

skills were acquired through training programs, apprenticeships, or simple daily observation. Second, there was religious learning, which for the bulk of the population meant basic instruction in the precepts and rules of religion and religious practice, often at second or third hand, filtered through poorly educated local religious figures and mixed with local traditions, and not necessarily doctrinally correct. Third, and only for a minority, there was advanced religious and academic learning (the latter including law, science, and medicine). As in comparable Christian societies, the educational process was religiously structured, with the teaching most often provided by priests/mullahs in facilities belonging to the church/mosque.

The bulk of such studying consisted of memorizing texts (the Koran, hadiths, previous legal rulings, and accepted theological interpretations), reciting them for the teacher, and receiving a certificate attesting to the successful mastery of a certain segment of material.

In Islamic as well as in Christian culture from the Middle Ages to the 19th century, it was possible but unusual for a woman to obtain a higher education. Such women usually belonged to one of three groups: they were daughters of learned men, who personally instructed them; they belonged to the political elite and were educated because they might have important family or dynastic duties in the absence of a husband or during the minority of a son, or as managers of a family business; or they pursued a religious career, for example, as abbesses or as mystics.³ In Islam, the most promising avenue for this latter career was Sufism, which boasted a number of prominent and highly educated women.

Other girls and women were more likely to learn practical skills, or acquire them through an apprentice system, such as midwifery, sewing, and embroidery or other trade and guild skills; some were trained in music, dance, and other arts, and many knew at least the rudiments of record-keeping and mathematics for marketing and business purposes and to manage their own property.

At the beginning of the 19th century, in most Muslim countries, a small number of girls and a larger number of boys typically would have been found attending mosque-schools (also known as kuttab schools), studying the Koran and receiving related religious teaching of varying accuracy and for varying durations of time, depending on the locale and on their social class and family circumstances. Children of the elites, a minority of daughters included, received superior education from private tutors, foreign schools, and individual study abroad.

³From the 17th through the 19th centuries, women with an advanced education "were mostly of the ulama class. Whether women of this class received education or not depended on whether a member of the family took the time to teach them. . . . Women's initial education was obtained in the family, but at later stages they could have access to male scholars and teachers . . . some women became renowned scholars and even teachers of hadith and tafsir (interpretation.)" Leila Ahmed, *op. cit.*, p. 113.

Education by Rote Learning

The negative effects of traditional Islamic religious-based education have been widely commented upon. The Egyptian reformer and intellectual leader Muhammad Abduh, himself a recipient of this kind of education, remembers spending "a year and a half without understanding a single thing, because of the harmful character of this method of teaching."⁴

Many authors believe that this kind of education produces an anti-scientific, anti-intellectual, passive, authoritarian mind-set. Rote memorization of the Koran is even more problematic in Islamic countries where Arabic is not spoken, as children are then not only learning complex passages without fully understanding their substance, but are indeed learning them in a foreign language without understanding them at all.

This is not really comparable to the role of Latin, say, in Western education. Among the elites, Latin was there treated as a living language, not as liturgical ritual. When texts were in Latin, the people dealing with those texts generally understood that language quite well. Throughout the Middle Ages, Latin was the language of university studies. As a remnant of this practice, some European universities to this day have statutes on their books that allow PhD candidates to submit their dissertations either in the national language or in Latin. Under the Hapsburgs, Latin was the official language of imperial administration in Hungary; Hungarian and Austrian officials communicated in spoken and written Latin.

When schoolboys in Afghanistan today chant out segments of the Koran in Arabic, this neither facilitates their understanding of the text nor helps make Arabic a lingua franca for Muslims.

One outspoken critic of the traditional rote learning educational style is Bassam Tibi, who postulates a direct causal link between the prevailing attitudes to education and learning in Islamic societies and their socio-political competitive viability. "Problem-oriented thinking cannot be learned through raw memorization," Tibi argues. "Traditional education, which expends its energies not in creative thinking but in memorization and reproduction, cannot produce a functioning intellectual group able to pose problems, define them, analyze them and finally solve them."⁵

⁴He was unable to tolerate this school and ran away to his village, preferring to do without any schooling at all and to become a peasant farmer. However, he was noticed and sponsored by a local religious scholar who personally took his education in hand. Subsequently, Muhammad Abduh studied at Al Azhar university, went on to teach there, and ultimately was appointed mufti of all Egypt, with the authority to pronounce binding religious interpretations (fatwas). See Nissim Rejwan, *Arabs Face the Modern World: Religious, Cultural and Political Responses to the West*, Gainesville, 1998, p. 13.

⁵Bassam Tibi, *The Crisis of Modern Islam*, Salt Lake City, 1988, Original German, *Die Krise des modernen Islam*, Eine

Tibi assigns to this educational method part of the blame for the social and economic backwardness of contemporary Islamic countries.

The notion of free, universally attended "public schools" is a modern concept, and in both Christianity and Islam, broad-based popular education inclusive of girls and women has been closely associated with political reform. In both cultures, this reform came about either at the behest of enlightened monarchs (this was the case in the Austro-Hungarian empire, where the "Volksschule," or people's school, was a beneficent creation of the empress Maria Theresia and her son Josef) or as a radical demand by democratic reformers and revolutionaries. This happened significantly earlier in the West than in the East.

While there were eras when Islamic civilization was well ahead of Christian civilization in terms of scientific knowledge and academic achievement, in the East this did not give rise to the notion of broad, mass-based education. That concept originated in the West and was imported by Western-influenced reformers.

Popular education in general, and the education of girls in particular, became a significant issue in the Islamic world through the 19th century modernist movement. In the view of reformers such as Qasim Amin, the inferior status of women was a central feature of and a main contributing factor to the relative backwardness, ignorance, and antidemocratic mind-set of Islamic society. Education, including female education, was identified as a key remedy.

This notion was embraced by some segments of the elite. Others vigorously opposed it, and Amin's demand for female education was at the time considered so radical that it was criticized by contemporary opinion leaders such as Mustafa Kamil.⁶

The establishment of girls' schools followed as a next step, often under the auspices of foreign missionaries or through endowments by elite individuals, including wealthy charitable women; these schools offered basic primary instruction to lower middle class girls, and education up to a high school level for middle and upper class young women. College represented the next hurdle, which was generally taken by first sending small groups of female students abroad for study or professional training, and then when disaster did not follow and people had gotten used to the idea, admitting the next cohort to national universities.⁷

vorindustrielle Kultur im wissenschaftlich-technischen Zeitalter, Beck, Muenchen, 1981.

⁶See Nissim Rejwan, *op. cit.*, p. 37 ff.

⁷For a thorough review of this process in Egypt, see Leila Ahmed, *op. cit.*, ch. 7.

Female Education in Afghanistan

In Afghanistan, modern education, and with it broader female access to schooling, followed the general course of development experienced by other Islamic countries such as Egypt or Turkey, though at a distance of many decades. In Afghanistan, girls' education was championed by modernizing monarchs as well as leftist and nationalist intellectuals roughly from the turn of the 20th century onward. The first girls' school was founded in 1921. Coeducational schools started to operate in the late 1920s, though education more commonly remained segregated through high school, not becoming coed until the college level.

The first female graduates were sent to Turkey in 1928 for advanced study in nursing. The University of Kabul was established in 1932, followed by the creation of universities in other cities. In the decades between 1930 and 1970, the formal government school system expanded significantly, while traditional mosque-schools also continued to operate. According to official statistics, there were 13 institutions of learning in Afghanistan in 1930, serving 1,590 students, while in 1967, 2,567 schools were attended by nearly half a million students. In 1988, official government figures held that 857,000 students were attending school. Girls were a minority, but they were included. The general pattern was for coeducation in primary school and at the universities, with separate schools for girls and boys at the level of middle and high school.⁸

By the 1960s, medical colleges, teacher training institutes, and vocational and industrial colleges, complemented by a number of international scholarship programs, were producing a steadily growing body of qualified professionals, including women,⁹ though reliable numbers are not available. These women readily found employment as teachers, in the medical field, and in government offices. The development was so rapid that it was not uncommon for illiterate women to have daughters with college degrees.

As in other Islamic countries, the spread of education was very uneven, with large segments of the population, both male and female, remaining almost totally outside the process. Afghanistan has persistently had one of the highest illiteracy rates on its continent. Toward the end of the 1970s, only 8.6 percent of school-age girls were attending primary school, 3 percent were in middle school, and 1.4 percent at the Lycee. At all levels, men's access to education remained significantly greater than women's, though the vast majority of males remained unedu-

⁸ *Afghan Demographic Studies*, State University of New York, Buffalo, 1975.

⁹ For a more detailed account, see Nancy Dupree, *The Women of Afghanistan*, Swedish Committee for Afghanistan, Stockholm, 1998.

cated as well. Nonetheless, considerable inroads were being made, especially in the urban areas.

In evaluating Afghanistan's emerging educational system during that period, however, it is important to note that quantity is not the only variable to consider. Nancy Hatch Dupree, arguably the most knowledgeable living expert on Afghanistan, asks why, after a hundred years of school establishment and the expenditure of much money and effort, "Afghanistan's education achievements remained the lowest in Asia." Part of the explanation, she believes, can be found in the nature of Afghan governance and bureaucracy during this time period. Governments and cabinets changed so rapidly that programs could never be implemented, and the royal elite, while nominally supporting popular education, in fact felt highly ambivalent about it because they feared its political consequences. Perhaps the most significant problem, Dupree believes, was the reigning pedagogic philosophy.

Rote memorization continued. Classrooms were teacher-centered, not child-centered. Teachers expounded, children listened, rarely posing questions, and seldom interacting in discussions. Remembering, not thinking, was important. Lessons were monotonous and boring, students passive and inattentive. Many dropped out. Dependable textbooks were limited. . . . Supplementary teaching aids and reading materials providing more entertaining lessons were all but non-existent. . . . Apathetic attitudes toward school attendance, the high drop out rates and the graduation of semi-functional literates to whom critical and analytical thinking was alien, were due largely to the rigidity of old curricula. In the rural areas, the question was: why waste time going to school when what I learned there is not relevant to my daily life? . . . There was little understanding that education should enhance interacting economic and social expectations.¹⁰

Dupree's article is worth reading in full, as it very clearly explains the relationship between the failure of the national educational effort and subsequent political and economic consequences. It also shows rather clearly that while any educational offering must tie in to prior and familiar structures, it would not be a good idea to seek to reinstate as exactly as possible the educational system Afghanistan was following prior to its current troubles, because that educational system in fact helped bring those troubles about. What is needed instead, as Dupree indicates, is an educational approach that bridges the old and the new.

The incipient process of educational growth in Afghanistan, however flawed, suffered a further series of enormous setbacks beginning with the socialist takeover and the subsequent Soviet invasion. Though the notion of free compulsory education had been established in the Afghan Constitution of 1931 and reconfirmed

¹⁰Nancy Hatch Dupree, "Education Patterns in the Context of an Emergency," *Refugee*, 17, 4, 1998, pp. 17-21.

in 1964, to general wide acceptance at least in principle, blunt Soviet-style efforts at social engineering alienated many Afghans. Soon after, war and civil war disrupted and ultimately destroyed the burgeoning infrastructure; worse, the dynamics of this conflict impeded the spread of more open, contemporary attitudes toward education, society, and the world at large.

In the refugee camps in Pakistan during the 1980s, education became a haphazard and highly ideologized affair. Instructional materials, the selection of the teacher, the curriculum—these were basically random. In the typical camp school, a young man with some sort of religious credentials would gather the children together in a tent, boys on one side and girls on the other, read portions of the Koran to them in Arabic, and have them recite loudly after him, then take the boys outside for quasi-military drills while the girls sat around waiting. Depending on the availability of chalkboards, books, and other supplies, there might be some simple mathematical instruction, as well as the teacher's idiosyncratic narrative of historical and current events.

Local Pakistani educational authorities and Pakistani and Afghan religious and political groups would sometimes appear at such schools, offering supplies and financial support in exchange for some influence over the curriculum, which the teacher might or might not agree to grant, and might or might not actually adhere to once the representatives had departed. Quality control, uniform standards, qualified instructors, and a systematic curriculum were largely absent.

In retrospect, NGOs today agree that neglecting to offer quality secular education to refugee children, while providing food, shelter, and health care, was one of the most serious mistakes made by the international community during that era.¹¹ It can be argued that the emergence of the Taliban itself is a direct outgrowth of this neglect, since this movement consists of the alumni of highly non-scholastic, ideologized Pakistani madrassas who took advantage of this educational vacuum and recruited young Afghan men.

Unfortunately, this "wisdom of hindsight" has not inspired NGOs to rectify their error. Of 1.3 million Afghan refugee children currently in Pakistan, only 120,489 are thought to be attending school. As was the case during the war against the Soviets, many of these schools are self-organized and run haphazardly by the refugees themselves or by Arab volunteers. Due to the worldview of many of these school organizers, many of them focus only on boys' education, and the 120,489 registered schoolchildren include only 36,185 girls. The situation becomes much worse after age 10, when additional restrictions fall into place. The Human

¹¹At a conference at the Council on Foreign Relations, representatives of major international NGOs agreed that "we wouldn't have a Taliban today if we had provided quality education in the camps 15 years ago." (Consultation on Women's Rights, Human Rights, Peacemaking and Reconstruction in Afghanistan, New York, June 29, 1999).

Rights Commission of Pakistan determined that there are 5,600 Afghan boys, but only 645 girls, in secondary school in that country.¹²

According to the BBC, barely two out of every 100 Afghan refugee children attend school.¹³

The failure of modern secular education, combined with the war-related diaspora of the more educated, modernized segments of the Afghan population, has brought about the rule of a largely ignorant, fanaticized "lumpen"-elite.

In an article aptly titled "The Students Who Came in from the Cold," Ahmed Rashid describes how the JUI (Jamiat-ul-Ulema-e-Islam), a strongly anti-Western Pakistani party affiliated with the fringe Deobandi sect of Islam, seized the opportunity provided by everyone else's default and set up hundreds of their own madrassas for young school-age male Afghan refugees. These, he explains, were run by "barely literate mullahs"¹⁴ affiliated with the Deobandi sect, which previously had been considered a more moderate group with tolerant positions.

The Taliban have little knowledge of Islamic and Afghan history, of sharia or the Quran. Their exposure to the radical Islamic debate around the world is minimal; indeed, they are so rigid in their beliefs that they admit no discussion.¹⁵

Considering their biographies, Taliban followers in many ways cannot be held entirely accountable for their views and actions. They grew up in refugee camps with no experience of normal life under conditions of peace, they have not been exposed to the values and knowledge of the contemporary world, and they are operating on the basis of minimal, distorted learning.

Education in Afghanistan Under the Taliban

The already very difficult educational situation in Afghanistan is currently in the process of deteriorating even further. The generation of young Afghans presently of school age will become even more deprived and even more alienated from the rest of contemporary civilization. A civil society with the concepts of tolerance, diversity, democracy, and human rights will become literally "unthinkable" in Afghanistan, as a generation grows up exposed to little more than superstition, parochialism, and xenophobia.

¹²"Afghan Children Unable to Get Proper Education," *The Nation*, republished in *Azadi Afghan News*, February 14, 2001.

¹³Azadi Afghan Radio, April 10, 2001.

¹⁴Ahmed Rashid, "The Taliban, Exporting Extremism," in *Foreign Affairs*, Nov./Dec. 1999, p. 26.

¹⁵Ahmed Rashid, op. cit., p. 27.

Under the Taliban, the education of Afghanistan's girls has come to a virtual standstill. Some home schooling projects and vocational training programs are surviving, but they operate with very limited resources and under constant jeopardy of sanctions and closure. Some indomitable NGOs forge ahead, bringing textbooks in via donkey caravan and wresting small concessions through arduous, oft-reversed negotiations with Taliban luminaries. The Swedish Committee for Afghanistan deserves special mention here; along with boys' schools, it has sporadically been able to operate a very limited number of girls' schooling programs.¹⁶

It has been estimated that up to 45,000 children in Afghanistan regularly attend illegal, informal "underground" schools. That number includes boys whose parents are dissatisfied with the quality of Taliban schooling.¹⁷

These schools vary in size from two or three pupils to twenty or more. The initiative is generally taken by an unemployed female teacher, who generally conducts classes in her home. Precautions are taken to avoid notice, such as having the students arrive at different times or changing the location when a crackdown is feared. These schools confine themselves to the primary grades, as Taliban tolerance for secondary education is presumed to be lower still, and serious repercussions are feared if girls above the age of 10 were to be "caught" in an educational setting.¹⁸

The Taliban's attitude toward home schooling projects for girls reveals three operant forces:

One, the Taliban is indeed opposed to the principle of educating girls. At times it claims, in response to outside criticism, that it has no fundamental objection to girls' education but that funding is temporarily not available, or that it wants to wait for the country to be more secure and to be safe for girls to attend school. This, however, is not really its position, as can be deduced from its treatment of home schooling projects. According to organizations that have been able to get permission—at least sporadically—to run educational programs of various kinds for girls inside Afghanistan, in order to avoid resistance from the Taliban, it behooves them to avoid the designation "school" altogether. As one NGO official put it, "The mere term 'girls' school' is a red flag to the Taliban."¹⁹ Instead, these facilities style themselves as "training centers" or use some other neutral term,

¹⁶For an overview of their approach, see Anders Davidson and Peter Hjukström (eds.), *Afghanistan, Aid and the Taliban: Challenges and Possibilities on the Eve of the 21st Century*, The Swedish Committee for Afghanistan, Stockholm, 1999.

¹⁷Siddharth Varadarajan, "In Taliban Country," *The Times of India*, March 19, 2001.

¹⁸Ibid. See also "Afghan Women Wage Secret War," *The Sunday Times*, UK, March 25, 2001.

¹⁹Afghan director of an NGO supporting home schools, personal communication, April 2000.

and emphasize the teaching of some harmless domestic art such as embroidery. This indicates that Taliban opposition indeed centers on the fact of granting girls an education. If safety were the issue, it shouldn't make a difference to the Taliban whether the girls are assembling in an outside facility to learn to read and write, or to sew and embroider.

Two, the imposition of Taliban rules is generally arbitrary, not only in regard to women but in other aspects of social and political control as well. There are two separate reasons for this. First, the Taliban's hold on the country is imperfect and its organizational structure is poor. It has not consolidated even its military possession of the country, and it has certainly not set up a functioning, coherent administration. On ideological and other issues, there are reports of significant divisions within the Taliban. Regionally, there are considerable differences in the extent of its control over the population. There have been many reported incidents of one Taliban official issuing a permit for some event or activity, and having other members disregard or disrespect it. Some of its strictures are carried out rigidly, while in other cases a small amount of popular opposition is sufficient to make the Taliban capitulate. Female Afghan employees of NGOs providing health care, equipped with official Taliban permits allowing them to work, have had these documents disregarded by other Taliban representatives. In some instances these women were pulled from the buses that were supposed to take them to their jobs in women's hospitals, and were beaten.²⁰ But in other reported instances, Taliban prohibitions against women's public celebrations connected to the Eid holiday were provocatively ignored by entire villages, to no ill effect.

Three, additionally, besides reflecting its lack of internal coherence and organization, an arbitrary imposition of rules in some ways enhances its control by making the Taliban appear irrational. Though we cannot know if this is deliberate, unpredictability increases the fear felt by those who must deal with Taliban representatives.

Repeated Taliban statements that it does not oppose the education of girls on principle, but merely lacks the necessary resources to offer it safely at this time, have repeatedly caused outside agencies to hope that the Taliban position could be moderated and that one could find ways to work with the Taliban on this issue.

Nancy Dupree, who as a lifelong advocate of the Afghan people has struggled to maintain a moderate and conciliatory position throughout, and has argued against sanctions and NGO pullouts in the interest of not abandoning Afghan

²⁰Related by representatives of Western NGOs at the Council on Foreign Relations seminar cited above; information exchanged at these CFR seminars is subject to the rule of non-attribution.

civilians, nonetheless comes to the regretful conclusion that the Taliban is unlikely to change its stance against girls' education. One hopeful moment, she reports, came in the winter of 1996-97, when

there was a flurry of optimism that the ban on girls' schools would be lifted after the winter recess. In meetings with the Ministry of Education, UN agencies declared themselves ready to commit an estimated \$300,000 toward the rehabilitation of schools, provided half of the facilities would be utilised for girls. . . . On 9 March 1997 when the schools opened, headmasters were directed not to register girls . . . ²¹

Under the present regime, boys are officially permitted, indeed they are encouraged, to go to school. When it comes to boys, the Taliban acknowledges education to be a desirable good, so much so that permission to run a girls' training project is often contingent on financially supporting an educational project for boys as well. However, the "education" of boys under Taliban rule is seriously flawed.

First, there are structural problems. The growing number of street children—orphans and children of indigent parents—have to scavenge for a living and can't attend school. Many rural areas are without schools. There is an acute shortage of teachers. Formerly, the majority of primary school teachers were women. According to a 1996 U.N. survey, Kabul at that time had 11,208 teachers, of whom 7,793 were women.²² Those who have not managed to leave the country are nonetheless not available since they are banned from employment.

The second set of limitations refers to quality. In Afghanistan today, a version of the archaic traditional mosque-based education has reemerged, stressing rote memorization of the Koran, supplemented by religious interpretations supplied by the teacher and some basic literacy and numeracy.

It should be remembered that the Taliban leadership itself is a product of Pakistani religious madrassa schools, while its footfolk is largely illiterate. And there is yet another complication. This movement is neither traditionalist nor fundamentalist. Its idiosyncratic interpretation of Islam is regarded as doctrinally insupportable by Islamic orthodox scholars in other parts of the Muslim world, including Egypt, Saudi Arabia, and even Iran. Instead, it rests on the threefold foundation of ignorance, opportunistic interpretations of Islam and tradition designed to suit the group's momentary practical aims, and a hybrid, quasi-nation-

²¹Nancy Dupree, "Afghan Women Under the Taliban," in William Maley (ed.), *Fundamentalism Reborn? Afghanistan Under the Taliban*, London, 1998, p. 154.

²²*Country Reports on Human Rights Practices for 1996*, U.S. Department of State, pp. 1415-1416.

alist political ideology. This sort of framework will not produce even a solid religious education.

The Taliban has so far proven resistant to international pressure on those issues of interest to world opinion, such as the drug trade and terrorism. It has also held firm to its gender politics, which it appears to see as a cornerstone of its rule. As in the early years of the Iranian revolution, this movement too has "mobilized against women from the beginning, devoting a large part of its energy to the intimidation of this . . . element which seemed to pose a permanent threat to the new order."²³

While some limited headway has been made on the issue of medical care for women, presumably because reproduction remains a desirable goal and a minimal female health standard is necessary to that end, there has been little change in rigorous Taliban opposition to girls' schools. The group appears determined to make women a permanent underclass by depriving them of education, knowledge, and access to the outside world.

Education and Civil Society

After decades of devastation, and if Afghanistan is to survive as a viable political entity in the modern world, it must meet daunting challenges not only in the areas of economic reconstruction and infrastructure provision, but also in terms of nation-building and in the establishment of a civil society. Ethnic, religious, and ideological rifts have deepened, and the decades of war and civil war have left many scores to settle. Habits of external intervention, successfully practiced by neighboring states, will be hard to break unless Afghanistan forms a stable political entity. Human rights issues and equity aside, it is impossible to conceive of these challenges being met absent education, and absent female education.

That Islam is fundamentally friendly to the concept of women's equal access to education is undisputed—it emerges so clearly from official doctrine that even the Taliban does not challenge the principle, merely its current feasibility. It also appears clear that the Afghan population, even in its present state of upheaval and emergency, wants to educate its girls. Lack of schooling opportunities for daughters, and only low-quality schooling for sons, is one of the prime reasons cited by refugees as their motive to flee Taliban-controlled areas of Afghanistan.²⁴

²³Daryush Shayegan, *Cultural Schizophrenia: Islamic Societies Confronting the West*, Syracuse University Press, London, 1992, p. 93.

²⁴See *Room to Maneuvre: Study on Women's Programming in Afghanistan*, UNDP, Kabul/Islamabad, 1996.

Home schooling efforts, both with and without outside support, flourish despite risks and obstacles, because the population regards education to be an important goal for girls.

U.S. officials who interviewed Afghan women among the refugee population in Pakistan in 1999 and surveyed views inside Afghanistan to the extent possible, found that "education is very important both to those who are educated and those who have not had the opportunity for education. They believe that it is only through education that a substantive change can take place in their lives. . . . Many refugees indicated that the reason they have not returned to Afghanistan is because of no schools for their children."

Possibilities for Outside Assistance

Technology offers an option to evade Taliban control and insert educational opportunities into Afghanistan even under the present unfavorable political conditions. This project envisions a "radio school" in the form of a daily educational radio broadcast, initially aimed at the preschool and elementary school ages. This is an optimum way to provide educational input to girls in circumvention of the Taliban ban on teaching them. As already explained, it will also benefit boys.

Radio is the medium of choice given the prevailing conditions in Afghanistan. VOA studies show that radio is widely available throughout Afghanistan and that people are eager and able to listen to foreign broadcasts, primarily VOA and BBC.

BBC broadcasts adult education shows in the format of a soap opera, with the characters learning various things about hygiene and health during the course of the dramatic narrative, and is preparing a story hour for children. BBC programs are very well received.

VOA offers English-language classes for adults via radio, a program popular with the (small) group of educated Afghans in Pakistan and Afghanistan.

In the current Afghan context, such a "radio school" can be expected to have several applications: it evades the ban on educating girls. While providing its primary audience—children of elementary school age—with basic literacy, numeracy, and learning skills, it simultaneously educates the listening non-literate mothers and other adults or older children. Both "live" and recorded, it can be used as a supplementary tool by home schooling endeavors. Groups supporting such schools believe that a daily broadcast would offer valuable support and sup-

plementation. Groups of children can listen to the broadcast together and follow up with exercises guided by their teacher.²⁵ Portions of the program's content are likely to be of interest to all family members.

²⁵Interview with an Afghan woman who operates 45 underground girls' schools inside Afghanistan, and says that radio support would be immensely helpful, April 25, 2000. Name withheld at her request.

2. Radio in Education

Historical Background

Radio has been an important educational tool in the past. In the West, radio was widely used for educational purposes from the 1920s until the 60s, mostly as a supplement to classroom instruction and for adult education. It was also used to reach populations in remote and rural areas, or in areas where, since they were far from the theaters and museums of the cities, the "fine arts" were not readily accessible. A significant body of literature documents these efforts.¹ The literature declines steeply in the late 1960s, reflecting the displacement of educational radio by television and later by the Internet as the primary relevant medium.

Radio has also been used in the context of educational programs in the Third World,² both for adult education and as a substitute for or a supplement to classroom education.

The school-related potential of radio was discovered almost immediately, and educational broadcasts date back to the 1920s. The BBC was among the early pioneers of this application. Attempts to utilize radio education in the developing world date back almost to the beginning; for example, Bombay instituted school broadcasts in 1929.³

How effective was this new teaching medium? A large number of studies seeking to explore that question were conducted during the first half of the 20th century. Some of these contain themes and insights that are still relevant today, but the studies also reflect some concerns and controversies that were destined to become defunct.

¹See, for example, *The School of the Air*, Perth, Australia, Government Printing, 1968; Frederic Willis, *Widening Horizons*, University of Chicago Press, Chicago, 1934; Roy de Verl, Helen Young, *Radio in Elementary Education*, D.C. Heath, Boston, 1948; Albert Reed, *Radio Education Pioneering in the Midwest*, Meador, Boston, 1943; Benjamin Darrow, *Radio Trailblazing*, College Books, Columbus, 1940; Richard Burke, *The Use of Radio in Adult Literacy Education*, International Institute for Adult Literacy Methods, Amersham, 1976; William Sweeney, *Using Radio for Primary Health Care*, American Public Health Association, Washington, D.C., 1982.

²*Radio and Television in the Service of Education and Development in Asia*, UNESCO, Paris, 1967; Ruth Eshgh, *Radio Assisted Community Based Education: Dominican Republic, A Case Study*, Duquesne University Press, Pittsburgh, 1988; Alex Quarmyne, *Radio and the Educational Needs of Africa*, Office of Education, Nairobi, 1984; James Theroux, *Techniques for Improving Educational Radio Programs*, UNESCO, Paris, 1978; Kumar Narendra, *Educational Radio in India*, Arya Books, New Delhi, 1967; A.P. Giri, *School Broadcast Programs Problems and Prospects, Case Study of Orissa India*, Deep Publications, New Delhi, 1991; Dean Jamison, Emile McAnany, *Radio for Education and Development*, Sage, Thousand Oaks, 1978.

³Minati Mohanty, *School Radio Programmes, Their Effectiveness for Pupils' Growth*, New Delhi, 1992, p. 7.

For example, early studies tended to be authored either by proponents of educational radio, who argued for its didactic superiority over traditional classroom education, or by defenders of traditional education, who took a defensive stand and were intent on proving that the new medium could not replace traditional teachers.

These texts are historically interesting in that they reflect the extravagant hopes and apprehensions that often accompany the introduction of new educational technologies. Some of these studies are so flawed by their ideological mission as to be nearly useless. For example, Roger Clausse's study entitled *Education by Radio School Broadcasting*, commissioned by UNESCO in 1949, is more in the nature of a pro-teacher essay, containing many value assertions but little empirical content.⁴

On the opposite side of the debate, proponents of radio schooling persistently hoped to show that radio education brought better results than traditional schooling, and were disappointed when comprehension and learning tests showed the two methods to achieve nearly equal success—a result that in later years would be considered highly satisfactory.

Only a decade later, this antagonism had resolved itself. Radio schooling was no longer seen as threatening to displace ordinary school, and studies focused instead on discovering the unique advantages of radio and identifying the specific educational situations where it could most effectively be employed.

Uses of Radio in Education

In the 1940s, the use of educational radio began in earnest. From that decade until the present, radio has been used for educational purposes in a variety of settings. The most important settings are:

Mass-Based Education for Adults

This method is often chosen to support a government program, for example, a health initiative or a vaccination campaign or an effort to motivate people for some civic event. As such, it can educate about abstract principles, impart general knowledge, or teach specific skills.

During the mid-1970s, radio programs were used for a wide range of instruction and influence. Radio broadcasts taught the benefits of a low-fat diet (Finland), informed about the basic food groups (South Korea), instructed women in family

⁴Paris, 1949. Some of the author's typical assertions include the observation that "school broadcasting can never have a personality" and that "nothing replaces a teacher."

health (Honduras), educated listeners about credit debt (Senegal), and encouraged new mothers to breast-feed their infants (Trinidad-Tobago) and to use iodized salt (Ecuador). They have been used to inform rural populations about upcoming elections and encourage them to participate, but also to teach listeners how to build latrines, make jam, and properly boil water. A major rural health campaign in Tanzania in 1973 reached 2 million adults at an estimated cost of 47 cents per person.⁵

Adult Schooling (Vocational Training, Literacy Training, etc.)

In this context, radio targets adults who are too busy, too poor, or too geographically isolated to attend regular classes but still want to obtain a certificate or degree; it can also instruct adults who wish to improve their understanding of some topic or acquire new skills (child-raising or home-making advice, tips on proper accounting, foreign language skills for personal use, etc.).

Alternative Schooling for Children

This targets children who are unable to attend regular school because they live in remote areas, because there is no money for schools in their area, or because they must work during school hours. Such schooling can include a role for a conventional teacher, or it can rely on available adults to assist with certain tasks, or it can address the solitary child. For example, some radio-based schools call for bi-weekly, monthly, or annual meetings with a teacher. Others call for an adult volunteer to assemble and supervise the group listening of the children. Some include testing and grant an equivalency certificate, others don't.

Supplemental Schooling for Children

This is usually done where properly trained teachers are not available or not available for certain subjects, or to standardize instruction in countries where the quality of teaching is very uneven by region. Under this system, the children generally listen to the educational program together in their classroom or a school assembly hall. Often, they will subsequently complete worksheets or other assignments related to the broadcast, under the guidance of their teacher. Radio has been used to teach English in Kenya, science in Papua New Guinea, and mathematics in Nicaragua; this latter AID-sponsored project is regarded in the literature as one of the more strikingly successful examples of radio teaching.⁶

⁵P. Spain, D. Jamison, E. McAnang, *Radio for Education and Development*, World Bank, 1977.

⁶See, for example, Ruth Eshgh (ed.), *Radio Assisted Community Based Education*, Duquesne University Press, Pittsburgh, 1988.

Educational programs have experimented with a variety of formats; which format works best will depend on the purpose of the education and the makeup of the intended audience. The major formats are:

- Individual listening for autodidactic purposes.
- Individual listening with some teacher support. This often includes a performance review that can lead to the granting of a diploma, school equivalency certificate, or other objective measure of achievement.
- Group listening on a social basis, for example, by a club.
- Group listening for a practical purpose, for example, by village groups that intend to jointly implement some sort of a project.
- Group listening under the guidance of a teacher.

The most important advantages of radio teaching were found to be:

- Radio was a highly accessible modern medium. Radio receivers are cheap and easy to operate, to power, and to maintain. They do not even require electricity. They are small, readily portable.
- Radio is highly cost-effective. Where teachers are not available or not well trained, or where there are no schools at all, radio provides standardized content at low cost: In the place of hundreds of teachers, all of whom have to be trained and paid and who must conduct class in dozens of locations, the program needs to be produced only once and can then be broadcast to theoretically unlimited numbers of students. The Nicaraguan radio school project estimated its costs at 50 to 75 cents per student per year.
- Radio is flexible and adaptable to personal and social circumstances. The instruction can be heard by an individual alone, by a group without a teacher, or by a class with a teacher. It can be integrated into a school system or run independently.

Radio schooling is part of a larger category classed as "distance learning" or "distance education." Over the past decades, within this field, radio has largely been overtaken by other media. Today, "distance learning" has increasingly come to mean television, video, and especially the Internet. Even in the Third World, educational radio is now largely a tool for adult education and for continuing teacher training. This is all the more so since AID, for budgeting and internal programmatic reasons, essentially phased out its radio education component some years ago.

The current professional literature on distance education is only partially applicable to our project, generally dealing with a different set of issues, such as teacher-

student satisfaction with Internet-based distance education courses in subjects such as linear algebra.⁷

The didactics of radio education as a means of delivering primary educational content to children—let alone as the sole means of delivering such content—have not really been developed. There are a couple of reasons for this.

First, radio education programs for elementary schools were generally undertaken by development agencies in cooperation with a host government. The motivation of the host government was either the need to overcome a shortage of trained and competent teachers, or the desire to attain country-wide standardization of instruction in a certain field, or a need to reach children in geographically remote areas or children who, for various reasons, could not regularly attend public schools. These programs always followed the preexisting national curriculum. Often, they focused on only one subject, such as mathematics or English as a second language. There was no need to develop a curriculum, because the curriculum was given, as were the standards and the learning goals for each year. The focus of the effort was on how to deliver the content of this curriculum using auditory inputs only.

Second, technology overtook the radio. School systems that wish to supplement their “human teaching” with substantive-added inputs have come to prefer cassettes (which can be used at the discretion of the teacher, without a commitment to a particular time or day), video, television, and computers.

Factors in the Success or Failure of Educational Broadcasting

As we have seen, the use of radio in primary school education has been very specific, with applications somewhat different from what we are proposing to undertake here. Nonetheless, there is sufficient overlap that a number of technical lessons may be learned from these prior cases. Radio is a distinct medium, and methods of traditional classroom instruction cannot be transposed to the airwaves. Earlier projects have grappled with this challenge and have come to a number of instructive conclusions.

Successful Attributes of Radio Education Programs:

1. high interactive content

⁷See, for example, Project ADEPT (Assessment of Distance Education Pedagogy and Technology), based at the University of Wisconsin, or ERIC Digest, Distance Learning, the Internet, and the World Wide Web, or the Distance Education Library website.

2. variation
3. segmentation/repetition
4. continuity.

High Interactive Content. Radio teaching carries the danger that the audience will listen passively without absorbing the content and that attention may drift. The best way to avoid this is to design a high-energy format that calls for responses from the listener.

Programs geared to children, as well as programs addressing adults in Third World settings, have generally not found it difficult to obtain such responses. In fact, it was found that even some programs that were specifically designed for passive listening unexpectedly solicited lively commentary and "replies." It began with the formal introductory greeting; listening villagers politely returned the salutation, even though they knew it came from an inanimate object, the radio set, and that their response could not be heard by the speaker. To reply politely was a reflex.⁸

A successful mathematics program from Nicaragua illustrates the benefits of a strong interactive format in children's educational broadcasting.

Nicaraguan elementary schools, starting in 1975 and under the sponsorship of AID, decided to try teaching first- and second-grade math exclusively by radio. There were no textbooks, and even the initially planned one-page worksheets were soon abandoned for reasons of cost. A half-hour broadcast was first heard by the schoolchildren in their classrooms. It was then followed by a half hour of teacher-guided activities. A performance evaluation conducted after the first two years reflected results superior to those of the control group, which received traditional classroom instruction. Results improved even further in subsequent years, with the gap widening to the advantage of radio-schooled children, as the curriculum was refined.

Analysts ascribe the success of this program to its highly interactive format. The units called for two or three out-loud responses per minute, in addition to written responses and physical responses such as clapping, exercises, or handling of concrete objects. Initially, the units included stories, but these were dropped. The reason is interesting:

Our initial view was that we would use stories to engage the children, and embed mathematical work in a story context to maintain interest. Pilot tests . . . convinced

⁸J. Grenfell Williams, *Radio in Fundamental Education in Undeveloped Areas*, UNESCO, Paris, 1950.

us that the mathematical activities are intrinsically interesting to the children and do not need story support, as long as the children are asked to respond frequently.⁹

As an illustration, the rhythm of a segment would go something like this:

Children, the number 5 is greater than the number 3. Please hold up 3 fingers.

(pause)

Now hold up 5 fingers.

(pause)

Which is more?

(pause for responses)

Which did you say is more?

(pause for responses)

That's right! Five is more than three!

This setup corresponds to the "obvious answer" category (see below).

The following example belongs to the "choosing among options" category:

Which is longer, a broom or a pencil?¹⁰

These are examples for conveying concepts without visual tools, in this case the concept "greater than/less than" and the concept "longer/shorter."¹¹

A successful interactive format requires good approximate timing. The time allowed to reflect on an answer should not be too short, which would cause frustration, or too long, which results in boredom. This timing needs to be determined by experimentation. As an illustration, the Nicaragua project developed the following guidelines:

Oral response to a question with an obvious answer	2 seconds
Counting one to five bottle caps	5 seconds
Making a choice among two or three offered answers	5 seconds
Writing a one-digit number	8 seconds
Drawing one to three circles	12 seconds

⁹B. Searle, P. Matthews, J. Friend, *Formal Evaluation of the Radio Math Instructional Program of 1976*, Stanford, 1977.

¹⁰B. Searle, P. Suppes, J. Friend, *The Nicaragua Radio Mathematics Project*, AID Document PN-AAD-833, 1975, p. 30.

¹¹The context of these formats will be discussed in greater detail below, when the Afghan radio school curriculum is sketched.

Variation. Besides the focus on interactive interplay, the successful radio teaching of children requires variation, frequent changes in topic to prevent boredom. A curriculum developed for the Dominican Republic, which used the Nicaraguan math curriculum but with literacy and other content, reportedly succeeded because of its rapid pacing.

A half-hour program contained a dozen or more instructional components.

Segmentation and Repetition. For non-classroom or non-traditional classroom settings, division of the curriculum into autonomous, interchangeable segments is important because reliable, continuous listening cannot be assumed. If the children must work to supplement the family income, have seasonal agricultural responsibilities, or live in a premodern culture that has not yet acquired the custom of punctuality, or if some of the pupils are older, then regular listening cannot be assumed and should not be a prerequisite for understanding. If missing a few hours will cause the individual to lose the thread, he or she will drop out. With segmentation, however, a student can miss one or more sessions and still keep up.

Though it is an important learning tool in itself, repetition is also the flip side of segmentation. Repetition not only reinforces what has been learned, it also allows listeners who are returning after an interruption to pick up what they may have missed.

The U.S. television program "Sesame Street" uses this method and provides a ready illustration of its advantages. This program teaches numbers and letters, but without adhering to their formal order. Unlike a traditional classroom, where you need to be present from the beginning and attend continuously, a child can begin watching "Sesame Street" at any time and view it with profit on any given day. "Sesame Street" also combines variation with repetition, for example, by using songs as repetition drills or picking up learned elements to repeat in that day's story.

Continuity. Overlaying both segmentation and repetition is continuity. Some ways to achieve continuity are to establish fixed characters who reappear in each show or guide listeners through the program, or to use sound effects as an auditory cue, signaling that a particular curriculum segment is about to begin.

A review of existing radio education studies reveals the principles that seem to make a program successful, and demonstrates which approaches are less suitable.

Closely analyzing these precedents is particularly helpful because several techniques intuitively expected to be good do not work in actual practice. I would

like to put particular emphasis on this point. In conceptualizing a radio school program for children, certain ideas almost inevitably arise, such as the idea to embed the teaching in a story format. This seems so obvious that the compulsion to use this method is enormous. However, the ideas that seem most natural and obvious do not necessarily work, and what works in one-on-one interactions, in a classroom or in television, does not necessarily work in radio. Much reinventing of the wheel and many unnecessary failures can be prevented by studying the precedents.

The single project that is most valuable in this regard is the Nicaragua Radio Math Project. Not only was this project carefully prepared by Stanford University's Institute for Mathematical Studies, it was also particularly well documented, with regular classroom observation and excellent critical reporting of early problems and the corrections made to solve them in curriculum and pedagogy. This program produced a number of very useful guidebooks on how to plan, write, produce, and evaluate radio school programs that are valuable to anyone engaged in a similar endeavor.¹²

Some practices that did *not* work well are:

- *Use of "cartoon" voices.* Children had difficulty understanding these voices. They needed to concentrate on understanding and differentiating between the cartoon characters, and were distracted from the actual lesson.
- *Use of stories.* Children had trouble following the plot, easily became bored, and were not interested in the characters.
- *Asking too many rhetorical questions.* Children did not distinguish between these and factual questions. Therefore, they attempted to answer them, which led to frustration.
- *Repeating instructions on the assumption that oral instructions are difficult to follow.* To the contrary, children followed instructions well and found it confusing to have them repeated, especially if the wording changed.
- *Embedding a unit in narrative and working the exercises and lessons into the story.* This was distracting, and it was easier to hold the children's attention through straightforward dialogue exchanges.

Conversely, some techniques that education experts had anticipated might not work, proved to work quite well in the radio medium. These included:

¹²See especially *The Radio Mathematics Project, Introduction and Guide*, Institute for Mathematical Studies in the Social Sciences, Stanford, 1980, USAID Document PN AAY947; Barbara Searle, Patrick Suppes, Jamesine Friend, *The Nicaragua Radio Mathematics Project*, AID Document PN AAD 833; *Interactive Radio Instruction Handbook, A Guide to Planning and Implementation*, Clearinghouse on International Development, 1988, AID Document PN ABC 729.

- *Having the children count by using their fingers.* This practice has fallen into disfavor with many teachers worldwide. However, it was found to be superior to counting with teaching materials for several reasons, at least one of which is highly pertinent to our Afghan case: teaching materials were not readily available, and fingers were. When teaching materials were acquired, their distribution led to arguments and was time consuming, and the materials were misused by the children for horseplay and were quickly lost. To solve that problem, teaching materials were improvised, in this instance by using bottle caps, but fingers were found to work better.
- *Using repetition drills and announcing them beforehand.* Such drills are considered one of the less entertaining features of learning, and children were expected to balk at them or lose interest, especially if they knew that such a drill was coming. This proved to be incorrect, and children participated quite willingly in the drills, especially when they were announced or acoustically signaled.

Characteristics of Unsuccessful Radio School Broadcast Programs

From some of the less successful or failed programs, we can learn what does not work in educational radio broadcasting. While some of the causes of failure are relatively obvious—at least in retrospect—others are less so.

Group ownership of a radio does not work well. Providing a village with a collective receiver for group listening may seem like a good idea. In practice, this has not usually worked out well. It often proves difficult to find a suitable location for the placement of this community radio, a place where people will like to go. Attendance is often not good, and the equipment tends to get neglected. This is the case wherever the ownership is unclear or disputed—ultimately, no one will feel responsible for maintaining the device. Alternatively, providing cheap, self-assembled radios (sometimes referred to as “saucepan specials”) for individuals or families works much better.

Women’s listening groups function better than men’s. Literacy programs and adult education programs in Third World settings report significantly higher success and better participation from women. In mixed groups, the dropout rate is significantly higher for men. Women are more willing to join with friends or relatives and attend listening sessions outside their homes.¹³ The studies did not venture an explanation for this difference.

Adult audiences are sensitive to condescension and transparent didactics. Broadcasts on how to be a good wife, for instance, were seen as patronizing and

¹³Narendra Kumar, *Educational Radio in India*, New Delhi, 1967.

inspired a high volume of complaints in India. Conversely, concrete instruction on topics such as how to care for a child with measles or the proper use of a toothbrush was well received in Samoa.

A radio program cannot mimic a school, especially in the absence of a teacher. In Mexico, a project for isolated Indian populations set up by the Jesuits consisted of grade-specific all-day broadcasts. The concept was that students would be assembled into groups under the supervision of a random, minimally educated local adult who was not a teacher. Each grade level would hear 15 minutes of relevant broadcasting and then occupy itself for 45 minutes absorbing this material and waiting for the second subject to commence, while the other grade levels heard "their" segments. This program experienced high dropout rates and was not successful.

In subsequent review, it was found that the Mexican project failed because the setup was too complicated. It required pupils to listen for 15 minutes to the segment designed for their age group, and then to sit through 45 minutes of broadcasting aimed at the other grade levels. This essentially became dead time, because it was too difficult for the children to occupy themselves quietly on their own, and they were bored. Those children who were unusually motivated and who persevered in the face of this, ended up hearing the same material over and over again, because de facto they had already listened to the entire curriculum for all grade levels during one year of school, though they may not have understood the content. This project might have worked in conjunction with qualified teachers, who could have spent the 45 minutes of non-relevant broadcast time with their grade level, doing exercises related to the 15-minute teaching segment that had just been heard.

This project is very instructive, because it shows that radio cannot mimic a physical, actual school, absent teachers and other school-related infrastructure, simply by broadcasting the curriculum. It either has to be directly linked into a school system, or it has to choose an alternative teaching approach.

By contrast, a successful project in the Dominican Republic also targeted isolated areas lacking in trained teachers, and also assembled children in improvised buildings or shelters instead of actual schools. Why did this project work when the other one failed?

The Dominican program consisted of longer lessons with a better structure. Each lesson, commencing at 4 o'clock, consisted of 25 minutes of math, 25 minutes of language, and 10 minutes of social studies, natural sciences, and recreational ac-

tivities. The motivation of the participants was to gain skills desired by them and their families (simple reading, writing, and math skills for everyday tasks such as making sure bills were correct and reading the instructions on medicine bottles), but also to receive a subsequent diploma. For the latter purpose, students were equipped with clipboards and worksheets which were collected and sent in by unschooled, locally recruited adult proctors.

Special Challenges of the Afghan Situation

The situation in Afghanistan is distinct and in many ways significantly more difficult and challenging than that faced by any previous radio school effort. It is necessary to be aware of this before embarking on such a project.

There is no national educational authority to support and facilitate the project, and no preexisting curriculum to establish the direction and the goals of the teaching effort.

Obviously, there are advantages to having official backing for a radio school project. You can then use the existing education and information infrastructure. Your program, once completed, can lead to some sort of certification for the pupils. Official channels can distribute auxiliary learning materials. Teachers, pupils, and parents will be inclined to accept your program, since it bears the official imprimatur.

However, lack of an official association is not entirely a bad thing. Several promising radio school projects never got under way because of bureaucratic difficulties unrelated to substance. They fell victim to such problems as competition between warring national agencies or internal power struggles within ministries.¹⁴ An independent broadcast avoids such difficulties.

Likewise, it can be advantageous to use a preexisting curriculum and to lean on a teaching system that is already in place—but only if that system is any good. The approach to learning officially favored in many Third World societies can be quite anachronistic and far removed from the current consensus on primary school pedagogy, which favors the active acquisition of knowledge and interactive learning and urges an “experiential, meaningful, inquiry-oriented and equitable” approach to teaching.¹⁵

In Lesotho, in the context of a Primary Education Project sponsored by AID and the World Bank, consultant Julia Johnson Rothenberg found that the guiding

¹⁴AID, personal communication.

¹⁵J. Piaget, *Science of Education and the Psychology of the Child*, N.Y., 1979; N. Ukpokodu, *Social Studies and the Young Child*, *Critical Pedagogy*, Sept./Oct. 1994.

principles in place in that country favored a highly traditional educational philosophy that no longer holds much currency with modern educators.

Classes (usually very large) in all schools were totally teacher-centered, emphasizing rote memorization, passive learning, conformity and obedience.¹⁶

The radio school will still need to engage Afghan educators and teachers who have been trained in, and who follow, traditional pedagogy, because every effort should be made to link into existing home school projects and support them. But it will be freer to structure its own offerings according to more contemporary teaching approaches than if it were under the ultimate authority of host country administrators.

Supplemental Teaching Materials Cannot Be Used

Many radio school projects use individual worksheets that are completed according to the broadcast instructions during the program, or afterwards with a teacher, to practice the newly learned skills. There is currently no feasible way to distribute these kinds of materials in Afghanistan. We can attempt to design games and activities that use and deepen the skills, and to give some ideas and guidance to home schools in this regard, but that will not entirely make up for the absence of written support material.

Learning Tools Will Be in Short Supply

Many people do not even have the basic necessities. Teaching tools that are considered absolutely rudimentary in the West cannot be assumed to be available in today's Afghanistan.

Pupils and Their Parents Will Be Distracted by Grave Problems

Certainly the needs of physical survival will come first, which is why the broadcast needs to be scheduled for a time of day when even children who beg or work to support themselves and their families can be assumed to have returned to their homes. Also, a generation unaccustomed to school will not reliably tune in for every hour, then sit attentively absorbing the broadcast. However, the desperate conditions in Afghanistan need not lead us to conclude that children will be too distracted or too depressed to take an interest in a radio school. Volunteers and NGOs have found that children in war-torn areas, including traumatized children from severe situations, are receptive to educational offerings and derive psychological benefit from them. This was the case, for example, in Bosnia, where

¹⁶Julia Johnson Rothenberg, *As Ye Sow, So Shall Ye Reap, From Consultant to Collaborator in the Development of a Teacher Preparation Program in Lesotho*, Sage, N.Y., 1993.

untrained volunteers with a handful of crayons and some paper were immediately engulfed by refugee children desperate for a diversion, and tracked down on subsequent days if they failed to show up. Mental stimulation is in short supply in Afghanistan. Individuals who regularly visit that country assure us that gaining the interest of listeners, including adults, should present no problem.

Separation by Grade or Skill Level Cannot Take Place

The content will need to appeal to as many listeners as possible. Our expectation is that by keeping segments short and interactive, listeners can be kept engaged, even if a particular exercise is not accurate for their age and skill level. In the case of the younger children, hearing and possibly mimicking, for example, a multiplication exercise will certainly not be detrimental. In the case of the older children, being easily able to accomplish an exercise theoretically intended for younger children may give them pleasure. Given the generally low level of education inside Afghanistan, much of the information in the science, history, and even math and literacy segments will probably be new to many adults. As for those youths and adults who have a degree of education, we hope to engage them with the "social studies" segments, the crafts activities, and the games and physical exercises, and to win them as lay teachers for their children or younger siblings.

This section would not be complete without mentioning some specific features of the Afghan situation that are friendly to a radio school project.

Home Schooling Has a Long Tradition in Afghanistan

In Afghanistan, as in other parts of the Muslim world, some families have always chosen to educate their children, particularly their daughters, at home—even when good public and private schools were available. Home tutoring, either by educated relatives or by hired teachers, was preferred by both elite and religious families for diverse reasons. The idea that children can learn at home instead of attending school is not an alien concept.¹⁷

The cultural familiarity of this custom has probably facilitated the, by all accounts, dramatic growth of the home school network among Afghans in Pakistan and inside Afghanistan.

¹⁷ It should perhaps be noted that historically, the method of home tutoring is well established in the West as well, from a Roman elite educated by Greek slave tutors, through the Victorian age.

Human Beings Can Be Obstinate, and Forbidding Something Often Lends It a Sudden Cachet

In German, this is known as the "Jetzt-erst-recht" phenomenon. It is entirely conceivable that the Taliban, by rigorously outlawing female education, has ironically managed to heighten public acceptance of that enterprise.

Education in Afghanistan Has Traditionally Taken Place Under Foreign Auspices

There is nothing new or alien, for Afghans, about the concept of foreigners arriving to educate their children. Missionaries, Peace Corps volunteers, and various foreign nations that sponsored schools have been a respected part of Afghanistan's educational system from its inception. Likewise, Afghans are accustomed to foreign radio broadcasts. An externally sponsored radio school should not be too startling a concept.

There Is No Other Feasible Option

The situation inside Afghanistan is highly unstable. Military control of the country remains contentious, though the Taliban controls the majority of the terrain. The Taliban's hold on general loyalty is questionable, as is its inner coherence; most experts believe that factionalism and internal divisions are rife,¹⁸ and in the face of its inability to govern and ongoing international refusal to grant it recognition, its future remains uncertain. It does not seem advisable to base an educational effort on the dubious prospect of cooperating with the Taliban, even if such cooperation could be achieved. To operate from outside the country, in as detached a way as possible, seems to be the most feasible option.

At the same time, the proposed radio school undertaking raises some basic questions:

What Can Such a Radio School Realistically Accomplish?

The radio school can in no way be seen as a replacement for an actual school system in Afghanistan. Given the difficulties and situational constraints listed above, the expected results will probably be modest. For example, it will probably not be possible to teach actual reading and writing to the bulk of listeners. Those listeners who have access to a literate adult—a parent, relative, neighbor, or home school instructor—who can show them how to form the letters and can tell them if they are doing it correctly may be able to acquire some basic reading and writ-

¹⁸See, for example, Markus Spillmann, *Neue Zürcher Zeitung*, May 11, 2001.

ing skills. For the remainder, we can only lay the groundwork for future literacy. They can learn to recite the alphabet, and more important, they can obtain an understanding of the concept that this alphabet represents sounds that can be transformed into symbols and connected into words. This is comparable to a preschool teaching goal and should make it easier to learn reading and writing later. Related exercises have definite value. For example, thinking of words that begin with a certain sound/letter is also an exercise in analytic thinking, a conceptual and an ordering skill.

Should One Attempt to Gain Taliban Permission for the Radio School?

The Taliban claims that it does not oppose girls' education but, rather, has two problems with it at this time: it does not have the money to fund it, and since opposition to the Taliban's governance continues, it cannot guarantee that girls will be able to travel to and from school in safety. Radio school eliminates both of these objections, and even accommodates the desirable goal (to the Taliban) of female seclusion, since it does not require any female person ever to set foot outside the house. Finally, the radio school aims at having an entirely unobjectionable curriculum, largely directed at the primary school level.

Should We Therefore Seek Taliban Approval for the Radio School?

Such approval might have some advantages. We could then broadcast from inside Afghanistan, which clearly is much cheaper. It would be easier to get feedback on the success of the lessons. Our constant awareness of local conditions would be greater.

Based on everything we know about the Taliban, however, this approach is doomed to almost certain failure. Even the most persistent, patient, and accommodating NGOs constantly experience random, arbitrary problems with the Taliban,¹⁹ even to the extent of sudden shutdowns, threats, or violence against Afghan employees of the project and expulsion of foreign project leaders. As has been seen in case after case, from humanitarian relief efforts to the international effort to dissuade the Taliban from destroying the historic Buddha statues, reasonable negotiating is not what the Taliban does best. Also, reaching an agreement with Taliban authorities who are in charge of a particular topic is no guarantee that some other Taliban official or self-appointed vigilante will not ignore

¹⁹See, for instance, the deeply depressing document by Jonathan Bartsch, CARE Afghanistan Case Study. *Violent Conflict and Human Rights: A Study of Principled Decision Making in Afghanistan*, Ford Foundation, Oct. 1998. With endless patience and a scrupulous neutral stance, CARE has taken the path of negotiation with the Taliban; this has not prevented its female employees from being "beaten with metal-studded whips by representatives of the Department of Vice and Virtue, having their property confiscated, being blackmailed into hiring relatives of Taliban officials, etc."

the agreement. This has repeatedly been the experience of NGOs, who laboriously hammer out deals with Taliban ministers and officials, only to have lower-level people harass and persecute their workers in spite of the official permission they have gained.

Trying to win the support of the Taliban for this undertaking carries one major risk. The worst possible outcome would be to seek Taliban permission, fail to get it, and then have to proceed without it. Having been asked and having gone on record as opposing a project, the Taliban would feel provoked if the radio school were realized against its wishes. It seems far better to be seen as proceeding on the assumption that the project is unobjectionable, an entirely value-neutral offering for children.

Is It Safe to Operate Without Such Official Permission?

Assuming that the broadcasting is done from the United States or, for reasons of cost, from a neighboring country such as Pakistan, the program itself is beyond the reach of the Taliban. However, it is equally important not to place potential listeners at risk. The last thing one would want to do with such a program is to make the situation of beleaguered Afghan families any more hazardous or unpleasant. Fortunately, there is good reason to conclude that such a program will not jeopardize its Afghan listeners. First, we have the example of the VOA and the BBC. Both of these stations have been broadcasting into Taliban Afghanistan for years, without the Taliban making any effort to prevent people from listening to them. Both of them broadcast news programs and interviews, the substance of which is often displeasing to the Taliban, reporting on Taliban military setbacks, statements by Taliban opponents, world condemnation of certain of its undertakings, and the like. Taliban officials are not happy with some of these reports, and the BBC correspondent in Kabul was recently ejected, her office closed. But broadcasts continued undisturbed from Pakistan.

Second, a careful search of available news reports, as well as reports of NGOs and IOs about events in Afghanistan, over a three-year period did not turn up a single instance of anyone being punished for listening to a radio broadcast. Besides the generally known and severe penalties for theft, drug dealing, adultery, and prostitution, the Taliban also punishes offenses against the dress code on the part of women, and insufficient beard length on the part of men. Music cassettes are confiscated from people's cars or from shops and are destroyed. People have been punished for watching television, though reportedly they continue to do so in a clandestine fashion. Wedding celebrations have been interrupted to make certain that music is not being played. Books and magazines are controlled and cen-

sored. I did not find mention of any effort at all to sanction radio listening, except to forbid the playing of music.

Nonetheless, it will certainly be wise to select the content of the radio school broadcasts judiciously, erring on the side of caution.

Rather than Taliban opposition to the radio school—a possibility which cannot entirely be discounted—a different risk should also be mentioned. It is the same risk that holds true for the home school projects. Under the circumstances, it is wonderful that home schools exist, but they are far from ideal, and there is a danger that they might become the new, lowered standard for girls' education in the region. There is no control or central guidance for their curriculum, the women who run them may or may not be qualified to teach, they do not provide a proper school environment or real schooling, and if they become institutionalized, girls will be permanently marginalized and secluded. Supporters of the Afghan home schooling network are certainly aware of this danger, but see no better alternative at this point.²⁰

The same holds true for the radio school. There is a danger that fundamentalist governments might discover the radio school to be, along with home schooling, a convenient tool for excluding girls from mainstream education.

Technology has been used for this purpose in places such as Saudi Arabia, where female university students are excluded from the lecture halls and can only observe the classes via television.

Radio school is not a replacement for school, but a stopgap measure, and that should be clearly stated from the beginning.

Will People Be Motivated to Listen and Encourage Their Children to Participate?

Presumably, the motivation to take advantage of the radio school broadcast will be similar to the motivation for sending children to illegal home schools. Parents and children will be driven by a desire to learn, to escape boredom and confinement, to be entertained, to defy a prohibition they don't consider valid, to develop their minds, and to prepare themselves for the future, which hopefully will include a time when attendance in real schools will be possible for both genders.

²⁰Interview with U.S. consular official, Islamabad, 1999.

3. An Afghan Radio School—Pedagogy, Curriculum, and Resources

A radio school such as this one cannot be outcome-based, because the situation is too unstructured and unconventional for such performance-related measurements. How, then, will we determine the goals of this radio school?

Wade et al. propose eight broad educational goals that seem useful as a guideline for our project:

1. to relate to others positively, acquire civic values, and conduct successful human relationships
2. to live healthfully, with an understanding of the functioning of the mind and body
3. to work responsibly, implying the ability to use time efficiently and be able to cooperate and appreciate all kinds of productive labor
4. to communicate clearly, which requires skills in speaking, reading, writing, and listening
5. to reason perceptively and know the skills of logical thinking
6. to conduct personal business prudently, with skills of planning and calculating
7. to manage the emotions and find ways of being happy, and
8. to relate intelligently to the environment, with an understanding of natural resources and their vulnerabilities.¹

From these broader goals, we need to “reduce down” in order to determine what a radio school without an institutional infrastructure, teacher support, or supplemental materials, and with an age range of children who have different degrees of prior knowledge and current learning support, can expect to achieve.

I believe that a safe goal lies in readiness skills such as those that guide early childhood learning curricula. If that goal can be exceeded, it is good, but if not, a valuable contribution will nonetheless have been made in each of the eight important areas above.

¹Theodore Wade et al., *The Home School Manual, Plans, Pointers, Reasons and Resources*, Seventh Edition, Gazelle Publications, Berrien Springs, 1998, p. 63. I have lightly edited this list to make it less culturally specific.

We will here define readiness skills as including nine areas or concepts:

- size
- colors and shapes
- numbers
- reading readiness
- spatial relationships
- time
- listening and sequencing
- motor skills
- social and emotional development.²

These not only are building blocks to later instrumental and factual learning but, perhaps even more important, also relate to mental habits and social interaction.

The following section will connect these goals to the individual curriculum components and give examples of what a lesson might consist of.

Sample Curriculum Components

The radio school should include the following curriculum elements:

- movement, exercise, and play components repeated at intervals
- a literacy segment
- a numeracy segment (math component)
- a health segment
- a geography or history segment
- an Islamic segment
- a crafts or other hands-on, practical project.

The task of the radio school curriculum—and it is no mean task—is to come up with lessons that can do almost entirely without instructional materials, a teacher, a book, or any kind of visual illustration.

²Educational Services, *Getting Ready for School*, World Book, Elk Grove, 1987.

The units need to be self-contained, to make sense to the listener regardless of the order in which they are heard, because listeners will learn of the program's existence at different times and may not be in a position to listen regularly to each broadcast.

Math Component

From the radio math program in Nicaragua, we can take the interactive patterning and many other structural and substantive inputs, but that program had a classroom structure and teachers to supervise the lessons and to provide follow-up practice. Many of the traditional classroom activities are not possible in this format—we cannot, for example, pass around worksheets with different geometric shapes on them and ask the children to match them up.

Our math instruction therefore needs to focus on basic concepts—on what we might call the “essence of math.” Rather than centering on concrete skills such as counting, adding, multiplying, and dividing—though these will have a place—our deeper goal is to inculcate habits and abilities of mathematical thinking: math readiness.

The goal is to impart fundamental concepts, such as counting, measuring, patterns, sorting, sequences, grouping, estimation, number manipulation, and problem solving.

Schiller and Peterson summarize the essential concepts that form the basis for math learning as follows:

- exploration of materials
- spatial relationships
- classification (by color, size, shape, category, function, or use of other senses such as odor or tactile quality)
- patterning (recognizing patterns, copying patterns, extending patterns [extrapolation], creating patterns)
- one-to-one correspondence (matching even sets, matching uneven sets, graphing)
- ordering (by size, by height, by weight, by other attributes)
- numeration 1 to 5 (learning numerals, counting, what is zero, addition, subtraction)
- shapes (circle, oval, triangle, rectangle, square)
- numeration 6 to 10
- fractions (connected with concept of sharing)

- measurement (length and height, weight, capacity)
- time, money.³

These are all concepts that can be imparted by radio lesson. In many instances, sound can be used in place of visual aids (for example, the concept of patterns can be taught by rhythmic clapping: clap clap snap your fingers, repeat).

We can refer the children to household items, as long as we are reasonably sure that we are asking them to assemble items that most households in Afghanistan today can be expected to contain, and as long as even an uneducated adult will be capable of assisting with the exercise (for example, if we ask children to assemble three objects and arrange them by weight, then the weight difference should be obvious to any adult and not require weighing or judgment calls). It is possible that exercises like this, that require leaving the radio set to assemble items from the house, will prove too distracting and too time consuming. This will be determined in the pilot phase.

Other skills, such as distinguishing time sequentially (before and after, yesterday, today, tomorrow), problem solving, and of course number manipulation skills (adding, subtracting) can be practiced by using narrative formats.

Islam Component

The Islamic segment has two purposes. First, it will make the radio school appear more familiar and more acceptable to traditional parents, to whom "school" is inevitably linked to religious learning and the Koran.

Second, the Islam segment can be a good learning tool, a familiar way to segue into a teaching of geography, to introduce the notions of multicultural society, diversity, and tolerance, and perhaps most important, to cautiously make this isolated population of children aware of an outside world with alternative ways of living.

Sample Units

1. HAJJ
 - What is the hajj?
 - Koranic passage on obligation to perform hajj.

³Pam Schiller, Lynne Peterson, *Count On Math*, Gryphon House, Beltsville, 1997. This book contains many suggestions for activities related to each concept, some of which are adaptable. For more activities and suggestions, see also Jean Sternmark, Virginia Thompson, Ruth Cossey, *Family Math*, University of California, Berkeley, 1986.

- Performing the pilgrimage to Mecca is a high distinction and the goal of every practicing Muslim, and women are specifically included in the commandment to make the pilgrimage if at all possible. There is nothing in any way controversial about hajj, and “hajjis”—those who have performed the hajj—have a position of special weight and respect in their neighborhood.

Our radio character can therefore “interview” an elderly woman who has been on hajj, then encourage the listeners to do the same in their circle of acquaintances.

“What about you? Do you have a friend, a neighbor, or a relative who has been on hajj? Ask them to tell you about it. What was it like? How did they travel there? What was the most difficult part? How did it feel to see the Kaaba? Which countries did the other pilgrims come from? How did their appearance differ from that of Afghans?” (Prompt: They will notice that the pilgrims came from many different countries and were racially mixed, including many North Africans and Africans.)

Purpose: geography; history; introduce a more diverse, tolerant image of Islam by describing the great variety of peoples engaging in hajj; create the opportunity for an outreach activity, as the local community is likely to include several hajjis.

To make it less controversial and more familiar to a generation of children who have led lives of great isolation, I propose to subsume the Geography and History Component under the Islam Component. An example follows.

2. MUSLIMS IN GERMANY

Segment introduces Muslim children from around the world.

“This is Yasmin, a Turkish girl who lives in Germany.”

Explain location of Turkey and Germany. Why did her family go to Germany? Where do they live? Girl talks about her day—when does she wake up, what is her school like, who are her best friends, what does she like to eat, what does she play after school, what does she want to be one day? She says a sentence in Turkish and German—what do other languages sound like? Count to three in Turkish, then in German. What is the currency in Germany?

Purpose: broaden knowledge of the world; give some basic facts on geography and other cultures; introduce the concept that Muslims live in many different countries under different kinds of circumstances; foster role model of active, educated Muslim girls and women.

3. WOMEN IN ISLAMIC HISTORY: ASMA

When the Prophet Muhammad preached in Mecca, many people followed him, and the powerful leaders of Mecca feared his influence. One day, Muhammad learned that they were plotting to kill him. His followers had already gone to Medina, and Muhammad and his most loyal friend Abu Bakr wanted to go join them, but it was too dangerous; the murderers were looking for them. They had to hide in the hills. Someone had to bring them food. That person was Asma, the daughter of Abu Bakr and the sister of Aishah, who had married the Prophet not long before. She went secretly to their hiding place during the night to bring them supplies. But when she returned home, the men of Mecca were waiting for her. They demanded that she tell them where Muhammad was hiding. But Asma refused to be intimidated—and Muhammad and her father got away.

Purpose: introduction to history; give a forum to a more mainstream version of Islam; introduce women in active but noncontroversial social and political roles.

Science Component

The goal of this component is twofold: to involve and challenge older children by imparting habits of curiosity, questioning, and analysis, and to instill these habits in younger children as well.

The National Center for Improving Science Education lists nine “big conceptual pictures” that ought to guide the teaching of science. They are:

1. *Organization*: Learning to classify.
2. *Changes*: Learning to observe and talk about changes. What properties were affected by the change? Can the change be measured? Learning to understand that a “change” is an “event” divided from the next event by “time.” Learning to notice repeatable patterns and cycles as distinguished from unique events.
3. *Systems*: Recognizing that a system has parts that are usually interdependent. Learning that a breakdown in one part of a system will usually affect the rest.
4. *Cause and effect*: Record repeatable patterns. Try to make predictions based on your observations.
5. *Models*: It is possible to represent reality in a more easily observable form, for example, in a map or diagram. Practice constructing models and representations of things that have been observed or done.
6. *Structure and function*: Each part of a system has a function. The nature of the structure allows an inference about its function, for example, an animal’s body relates to its habitat.

7. *Variations*: No two living things are identical, despite apparent similarities. Learn to observe, verbalize, and record variations.
8. *Diversity*: Recognize the vast amount of diversity in the natural world. Learn that most events are affected by many variables, many of which cannot be controlled.
9. *Scales and measurement*: Measurements are meaningless without a context. Recognize that perception is relative to one's position, which will determine if something seems large, loud, etc. Learn to compare and contrast.

This list not only gives us the prerequisites for scientific thinking, it also relates to concepts relevant to an intelligent, rational civil society.

In simple form, these nine concepts can be taught by radio lesson.

Criteria for the design of these lessons should be:

- relevance to the likely immediate experience of children
- potential for being understood through the narrative
- potential for being deepened by simple, hands-on activities
- relevance to problem situations of everyday life.⁴

Also, this component can readily be linked with others, such as the geography component, for example, in a unit on weather or on diversity.

Sample Units

Concept 1: Classify. Things that float vs. things that do not float.

Float and Sink

Fill a large container with water: a pot or a bucket is good. Now collect some things from around your house—an onion, a rock, a stick, a piece of paper, a button, as many small things as you can find. Now drop them into the water one by one. Did some of them sink? Which ones floated? Can you guess something in your house that will float?

Concept 7: Variations. Different kinds of clouds.

Do all clouds look the same? Explanation of different cloud types. What are clouds made of? Function of clouds.

⁴Adapted from Jean Harlan, Mary Rivkin, *Science Experiences for the Early Childhood Years*, Prentice Hall, Columbus, 1996, p. 43.

It seems sensible to subsume both the Health Component and the Hands-On Projects Component under the Science Component, to give context.

Exercise and Movement Component

In other radio schools, exercise and movement segments were included primarily to break up the hour and keep children engaged through a physical interactive component. In Afghanistan, the confined situation of girls provides an additional reason to encourage movement and play. In the Afghan refugee camps during the Soviet occupation, women and girls were often confined to a tent or compound for very long periods of time, sometimes for years. They suffered from a number of physical and developmental disorders caused by a lack of movement and mental stimulation. The refining of fine and gross motor skills is a crucial part of child development, so physical movement should be included in the radio curriculum as much as possible. Some of it can be linked to learning units, but some should consist of ideas for movement and for games that can carry over into the remainder of the day.

Color/Jumping

Aziza has brown sandals. If you have something brown on today, jump up and down now. If you're wearing something white, jump now. Blue—now (with sounds).

Inside/Outside

Aziza is using her scarf to make a circle on the floor. Can you do the same? Then we'll play a jumping game. Are you ready? Aziza is going to tell you where to jump: into the circle, inside the circle, or outside the circle. If you're going to keep up with her, you'll have to listen carefully, because she's very quick.

Inside, inside, outside, inside, etc.

Number Walking

We learned about the number five today. Let's take five big, gigantic steps across the room. Is that the biggest step you can take? Now let's take tiny little steps, very light little steps. Now let's take five steps on our tiptoes. With toes pointed in/pointed out/walking backwards. Jump 5 times.

Put your hand on your chest. Can you feel your heart beating? Now that you've been jumping, it's beating faster than it was before. After you've stopped for a while, it will slow down again.

Coordination

Put your hand on your knee, your elbow to your knee, your hand to your nose, your toe to your forehead—oh, you'll have to sit on the floor for that one! Can you do it? Put your finger on your toe, your nose on your knee, clap your hands behind your head, etc.

Animal Math

You learned about the number three today, but Abdul's animal friends want to learn it too! Can you help his cat count to three? (meow, meow, meow). Very good! That is a smart cat now! What about the goat? Let's help the goat count to three. (baa, baa, baa) etc.

Literacy Component

Since reading is the quintessential visual experience, making progress toward the teaching of reading and writing through auditory instruction alone is probably the biggest challenge faced by a radio school project. Radio schools are successful in teaching languages, in fact that has become one of their remaining, enduring roles, but only in combination with workbooks.

The only mitigating factor is that reading, especially for children but really for anyone in preliterate society, is closely associated with storytelling, which is a listening experience. However, this is probably the most difficult component to design.

For some listeners, the program will not be able to do more than lay the foundation for later literacy. How much progress listeners can make will depend on the level of additional support available to them. Children with a literate parent and children who also attend home schools will benefit the most.

Orienting ourselves toward those who do not have such resources, we should focus on setting the stage for later reading and writing, and for improving their language and expressive skills more broadly.

The process of learning to read consists of three stages: emergent, early reading, and fluency.⁵ Emergent and early reading mainly require children to come to some fundamental realizations about how written language works: that it is used to permanently record thoughts and stories in such a way that others can always discover what they say, and that words are strings of sounds that one can decipher and recognize.

⁵ Brian Cutting, *Getting Started in Whole Language*, Wright Group, Bothell, 1989.

"Reading readiness" requires prior development in several other areas:

1. language development
2. visual perception
3. auditory perception
4. motor development.⁶

Within each of these categories, there are manifold opportunities for radio lessons. Language development is facilitated by understanding the structure of a story, by learning to describe objects and events, by completing a partially told story in alternative ways, and by practicing following directions.

Visual perception is enhanced by focusing on colors, shapes, and many of the other activities included in the science and math units.

Learning to distinguish between different sounds is an auditory perception important to reading, because reading requires a person to link a printed symbol to a previously understood sounded symbol.

Motor development is necessary for writing, preparing for the requisite hand-to-eye coordination. The play and exercise units of the radio school will assist in gross and fine motor development.

Lines and Letters. Learning to write—to hold a writing implement, to form regularly shaped letters that conform sufficiently to "code" that others can decipher them, and to string these letters together in blocks forming words, along a straight line—requires fine and gross motor skills. Some degree of practice in these areas is possible even if we assume a worst-case setting. Dari and Pashtu, the two most important languages spoken in Afghanistan, use the Arabic alphabet. Learning to draw lines, circles, waves, and dots is good hand-to-eye practice. Some letters are simple enough that they can be taught through auditory instruction alone; for example, the A, a straight vertical line. Certain other letters, which resemble familiar shapes and items (such as a cup), can also be attempted by everyone. Beyond that, picture symbols can be used to implant the idea of a symbol standing for a word. This is a familiar practice in early-reading texts for children at a point when they command only a few letters and can only read a handful of two-letter words, where a picture of an object is inserted among these words in order to make an actual sentence. In this exercise, we will assign a word

⁶Wade et al., op. cit., p. 164.

meaning to a simple symbol, such as a circle, and ask the listener to remember it. Four such symbols are enough to “write” a “sentence.”

“The Story of Me.” Exercises such as this one play an important role in primary education. They enable children to develop their sense of identity, and to think about how we perceive and relate to one another. In this exercise, children are prompted to state their name and age, describe the location they live in, list their likes and dislikes in given areas, and describe special features and other personal trademarks. These form a story.

This simple exercise can form the basis for further reading- and writing-related explorations:

There are factual and fictional stories about people. How do you distinguish them? Make up a fictional story starring yourself. Ask an older person to tell you what things were like when they were your age. There is biography and autobiography. Etc.

Sound-Search

Latifa’s name starts with the sound L. Last night was cold, and when she slept she covered herself with a quilt (layaf)—that starts with the same sound. What sound is that? Yes, L. I’ll bet there are things in your house, too, that start with L. Can you find one? (Prompt by suggesting additional ordinary household items starting with L.)

Summary of Radio School Goals

In developing a radio school curriculum for a society in such dire circumstances, we need to focus clearly and realistically on our goals. What can we strive to achieve given the amount of devastation and collapse this society is experiencing? To develop our goals, we need to first distinguish between three levels of educational purpose:

- knowledge, information, and basic skills
- concepts, attitudes to learning
- civic values.

In the Afghan context, we can aim to transport some basic skills and knowledge in the curriculum areas outlined above. If and when real school becomes possible, these will provide a starting point. For listeners who can draw on some kind of support from better-educated adults, a level of competency can be achieved.

Perhaps more important, we should certainly be able to convey basic concepts of modern learning. The workings of things can be analyzed and understood; one’s

environment can be inquisitively studied; the characteristics of things can be sorted into categories; words are composed of sounds. Such insights are essential to the development of intelligence in children.

The third strand of education may prove to be the most valuable. Civic values—such as tolerance, compromise, pluralism, self-determination, and cooperation—have been given short shrift in Afghanistan's recent decades. The currently imposed reality is hostile to these values. Older people may remember an alternative, but younger people have no standard by which to measure the Taliban's version of social life. Alternative visions will have to be carefully assembled. They need to be unassailable, confident, and culturally palatable.

Lesson Resources

Resources for Content

In looking for potential sources for curriculum content, I looked to the following:⁷

- literature outlining primary non-formal educational goals for different age groups, including Montessori and other such guidelines, and the learning tools they use
- literature on how to set up non-traditional curricula. A great deal of literature exists on this topic, most of it intended as support for U.S. home schooling endeavors
- books and websites addressed to preschool and elementary school teachers and to parents, containing practical instructions and ideas for classroom activities and for homemade teaching supplies that use cheap and simple materials.

All of these sources can be useful, though they were not quite as useful as I had initially anticipated. Their limitations relate not so much to culture as to affluence and infrastructure. The home schooling and the Waldorf philosophies both consider themselves critical of consumer society, cautious about the impact of modern technology and the media on the psyche of young children, thrifty, and even somewhat Spartan. Even so, the resources they rely on, and the infrastructure they take for granted, are vast and luxurious compared to the current Afghan context.

⁷Useful sources were Jenifer O'Leary, *Write Your Own Curriculum*, Whole Life Publishers, Stevens Point, 1993; Marle Karnes, *You and Your Small Wonder, 150 Parent-Tested Activities from Birth to 18 Months*, American Guidance Service, Circle Pines, 1982; Lesley Britton, *Montessori Play and Learn*, Crown, N.Y., 1992.

Also, Western home schooling assumes the supplemental use of school facilities, libraries, museums, sports facilities, playgrounds, and other public places, an infrastructure either unavailable in Afghanistan today, or not accessible to women and girls.

Nonetheless, the resource collections in this field are so vast that even if we are obliged to discount much of it as inapplicable, we are still left with a huge body of ideas, exercises, learning games, hands-on projects, and the like to draw on and adapt—more than we could ever need. The support materials range from math games and exercises that deepen numerical skills; to crafts projects; to methods for gently addressing emotional and social issues, such as the fears that children affected by personal or political crises may feel about dramatic events in their surroundings.

A particularly good database with many useful inputs along this entire range is that of the German "Archiv Grundschule."

Human Resources

A number of Afghan-American professionals living in the United States have expressed an interest in supporting such an undertaking in whatever way they can, for example, through translating, helping prepare the program content and assessing it for "cultural correctness," obtaining old Afghan schoolbooks and reviewing them for useable content, collecting folktales, putting together health and hygiene units, and the like. This group includes individuals who have founded, or work for, NGOs presently active in Afghanistan, and other persons who regularly travel to that country. These individuals have offered to provide feedback and establish links between the radio school and home schooling projects.

Implementation

The basic approach of this project was discussed with experts at VOA, BBC, AID, and ORF,⁸ and their comments have been integrated into this paper.

VOA calculated a budget for such a radio broadcast, estimating the cost for a daily half-hour broadcast in the two main languages, Dari and Pashtu, at roughly 500,000 dollars per year, including a permanent project director, lesson development, recording, and air time.

⁸The Oesterreichische Rundfunk had a consultative relationship with Afghan national radio during the years before the Soviet invasion.

There are arguments for and against using VOA for such an undertaking. The argument in favor is that VOA has an impressive infrastructure, and is a known quantity in Afghanistan, with an established base of regular listeners. It would therefore be easier to make the existence of this program known. The argument against VOA, of course, is that it is an official U.S. agency, and the school may thus be seen and opposed as a propaganda effort. A second argument is cost. It is considerably cheaper to produce and broadcast from Pakistan, as BBC does. Another option might be to produce the programs in the United States and merely broadcast them from a neighboring state such as Pakistan, which gives more assurance of quality control.

Conclusion

Although there have been radio school projects for elementary age children in the past, a radio school for Afghanistan presents added difficulties and in many ways breaks new ground. Given the near-total dearth of any serious education for children in Afghanistan, and the intransigence of the ruling Taliban, an external option such as this one seems like the only feasible effort at this time. It should be regarded as a kind of placeholder until, hopefully, the situation changes and real schools again become possible. If, by that time, the radio school has hit its stride, it can then become a valuable adjunct to a fledgling public school system, more in the nature of the role played by radio school programs in other countries.

The type of radio school envisioned here might, if the concept works out, be utilized in other difficult educational settings, such as refugee camps or totalitarian states with an excessively restrictive grip on their school system.

If we consider that the Taliban is what we get when we leave children of war to their own devices and to the care of radical, politicized "educators" in religious madrassas, then it makes a lot of sense to focus a greater effort on younger audiences. Afghanistan is an extreme, but not a unique, case. The concept of delivering a modern, non-ideological primary educational message from a distance seems worth developing.

Appendix

Steps in the Process for Designing Radio Lessons (adapted from Nicaragua Radio School Project):

1. The curriculum specialist, in consultation with local experts, specifies the general content of the curriculum, then divides it into small units that can serve as a basis for lesson design. This can be adapted from an existing national curriculum or designed from scratch.

For example, a math curriculum for the early school grades is composed of 7 topics, or “strands”:

basic concepts

number concepts

addition

subtraction

applications

geometry

measurement.

2. The curriculum specialist designs an individual lesson, for example, addition of numbers up to 5. Each lesson should have three parts:

learning how to perform the task

receiving an opportunity to practice the task, and

reviewing the task.

3. The script writer translates the specifications for the lesson into a radio script.

In this example, the script writer has chosen to use a carnival as the setting for the lesson segment. Three characters—Lulu, Carlos, and Lobo—are visiting the carnival and are talking about the many things one can see and buy. Lobo, a character who often makes mistakes, asks the children to help him count the things he has bought.

Lobo: First I got 2 balloons, then I got 3 more. I think 2 plus 3 equals 5.

Carlos: Wait, let's see if he's right. Attention, children. Hold up 2 fingers on one hand...and 3 fingers on your other hand. How many fingers are there? (pause) That's right, 2 plus 3 is 5.

(This section represents the "learning how to perform the task" part.)

And what else did you get, Lobo?

Lobo: I got 2 caramels, then 2 more.

Carlos: Children, tell me—how much is 2 plus 2? (pause) That's it—4. But let's prove it. Hold up 2 fingers on one hand, and on the other hand hold up 2 more. Now tell me, how many fingers are there? (pause) Very good—2 plus 2 is 4.

(This represents the opportunity to practice the task.)

Segment continues with: 4 and 1 balls, 1 plus 2 flags, etc.

Note: For the Afghan context, given the conditions in the country, a less acquisition-minded theme is probably better.

4. The lesson is produced as follows:
 - a. worksheets are prepared by an artist
 - b. a teacher training expert prepares the teacher guide
 - c. the recording artists record the lesson under the direction of a radio producer.

For the Nicaragua broadcast, three professional recording artists were able to play all the necessary parts. Prerecorded sound effects and songs allowed for the production of entire tapes in real time. Unless an error was found, the tapes were not edited. With some experience, it took an hour to produce a 20-minute tape.

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